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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,670	01/26/2004	Jean-Yves Simon	TI-36989 (1962-09800)	9476
23494	7590	08/10/2006	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED			ALPHONSE, FRITZ	
P O BOX 655474, M/S 3999			ART UNIT	
DALLAS, TX 75265			PAPER NUMBER	

2133

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/764,670

Applicant(s)

SIMON, JEAN-YVES

Examiner

Fritz Alphonse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-23 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Specification

1. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-10, 12-16, 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eggleston (U.S. Pat. No. 6,906,961) in view of Kikuchi (U.S. Pat. No. 6,131,139).

As to claim 6, Eggleston (figs. 1-3) shows a system (134), including a flash memory (100); a controller (130) coupled to the flash memory (100); and at least one register (128/114) coupled to the controller (130).

Eggleston differs from claim 1 in that he does not explicitly disclose “a controller shifts a data block between the flash memory and the controller while computing an ECC for said data block.”

However, in the same field of endeavor, Kikuchi discloses an apparatus for reading and writing of flash memory including a controller, which shifts a data block between the flash memory and the controller while computing an ECC for said data block (figs. 2, 11, col. 16, lines 30-41).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time of the invention to combine Eggleston with the flash memory device, as disclosed by Kikuchi. Doing so would provide a memory reading control apparatus capable of reading data stored in the same memory addresses of a plurality of semiconductor memories and thus improving the performance of the memory system (col. 3, lines 37-41).

As to claims 7-10, Eggleston discloses a system, wherein the flash memory is a NAND Flash memory (col. 5, lines 40-49); the system stores a first portion of the ECC in a first register; and storing a second portion of the ECC in an alternate register if the first register is full (fig. 8; col. 16, lines 45 through col. 17 line 5). Eggleston discloses a system, wherein the controller transfers contents of all registers to memory (col. 16, lines 9-30).

As to claim 12, Eggleston discloses a system comprising: a means for storing a data block (i.e., flash memory 100); a means for transferring a data block (i.e., controller 130).

Eggleston does not explicitly teach means for simultaneously computing an ECC of the data block; and means for shifting the data block between the means for storing and means for controlling while computing an ECC for said data block.

However, the limitation is obvious and very well known in the art, as evidenced by Kikuchi (figs. 2, 11, col. 16, lines 30-41). See the motivation for the same reason disclosed in claim 6 above.

As to claims 13-16, 20-23 Eggleston discloses a system, wherein the flash memory is a NAND Flash memory (col. 5, lines 40-49); the system stores a first portion of the ECC in a first register; and storing a second portion of the ECC in an alternate register if the first register is full (fig. 8; col. 16, lines 45 through col. 17 line 5). Eggleston discloses a system, wherein the controller transfers contents of all registers to memory (col. 16, lines 9-30).

As to claim 1, method claim 1 corresponds to apparatus claim 6; therefore, it is analyzed as previously discussed in claim 6 above.

As to claims 2-4, Eggleston (fig. 8 A-B) discloses a method, comprising: storing a first portion of the ECC in a first register; and storing a second portion of the ECC in a second register if the first register is full (col. 16, lines 31-66).

As to claims 18-19, the claims have substantially the limitations of claims 6 and 10; therefore, they are analyzed as previously discussed in claims 6 and 10 above.

3. Claims 5, 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eggleston in view of Kikuchi as applied to claims 1, 6 and 12 above, and further in view of Acton (U.S. Pat. No. 6,594,792).

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As to claims 5, 11 and 17, Eggleston and Kikuchi do not disclose a system, wherein computing the ECC comprises performing the Exclusive-OR function. However, the limitation is obvious and well known in the art, as evidenced by Acton (col. 7, lines 30-47).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time of the invention to improve upon the data processing system, as disclosed by Acton. By doing so a different error correction code may be used which provides double-bit or greater error correction capability.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks, Washington, D.C. 20231

or faxed to: (703) 872-9306 for all formal communications.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Fourth Floor (Receptionist).

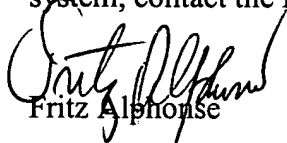
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse, whose telephone number is (571) 272-3813. The examiner can normally be reached on M-F, 8:30-6:00, Alt. Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert De Cady, can be reached at (571) 272-3819.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-3824.


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Information regarding the status of an application may also be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Fritz Alphonse

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August 3, 2006


GUY LAMARRE
PRIMARY EXAMINER